

**COLORADO WATER QUALITY CONTROL COMMISSION**  
**STATE OF COLORADO**

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**RESPONSIVE PREHEARING STATEMENT OF PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

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**PROPOSED REVISIONS TO THE BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER (REGULATION NO. 31) AND ADOPTION OF A NEW NUTRIENTS MANAGEMENT CONTROL REGULATION (REGULATION #85)**

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The Pikes Peak Area Council of Governments (PPACG) hereby submits its responsive prehearing statement in the above rulemaking.

**I. SUMMARY OF POSITION**

The primary issues and concerns regarding the proposed nutrient criteria stated in Regulation No. 31 and No. 85 are shown below:

- There is disagreement regarding the environmental benefit that will be obtained from implementation of the proposed nutrient criteria, especially total nitrogen, and the technical basis for how nutrient criteria were developed.
- There does not appear to be strong scientific support, rationale, peer-review concurrence or precedents for development of the proposed total nitrogen values.
- The proposed criteria will require expensive wastewater treatment upgrades to meet the new numeric limits and these costs will be passed on to ratepayers as increases in user charges and, in some cases, ad valorem taxes.
- The cost/benefit analysis final report shows the costs to exceed the benefits on a state-wide basis as a ratio of 1 to 0.79 (costs to benefits) for the most lenient or relaxed level of nutrient control examined in the study. For higher levels of nutrient control, the costs exceeded the benefits by greater values.
- The cost/benefit ratio published for the Fountain Creek basin for attainment of the lowest level of nutrient control was 1 to 0.83. This ratio analysis included the value of “active” benefits for angling, boating and swimming attributable to nutrient control in the Fountain Creek basin with a present worth value of \$116,694,000 in addition to “passive” benefits valued at \$140,763,000.
- This study projected the present value of costs for the lowest level of nutrient control to be \$333,618,000 for the Fountain Creek basin, all such impacted public treatment facilities being in El Paso County.
- The cost/benefit analysis study did not adequately assess the cost/benefits for implementation of the proposed criteria, especially for smaller dischargers that do not benefit from economies

of scale. The implications of the Regulation 31 water quality standards to be considered in water quality standards reviews starting in 2017 were not assessed.

Each of these positions will be described in more detail below.

## **II. Background**

PPACG is the lead water quality planning agency for El Paso, Teller and Park counties, which have a total population of about 660,000 and represent about 15 % of the total population of the State of Colorado. Within the three-county planning boundaries, there are 14 discharging facilities that have a discharge greater than 0.5 mgd (Exhibit 1) and would be affected by the draft proposals stated in Regulations No. 31 and No. 85. The Clean Water Act (208(b)(2)(E)) requires PPACG as a 208 planning agency to consider the economic, social and environmental effects of carrying out the Plan. This would include implementation of proposed water quality standards.

The complexity of addressing nutrients has been recognized by the EPA in the statement, “A single national approach to nutrient criteria development was determined to be inappropriate due to regional variations in geology, vegetation, climate, and soil types that exist and the lack of a clear technical understanding of the relationship between nutrients, algal growth, and other factors such as flow, light, and substrata.” (pg. 5 New Jersey Nutrient Enhancement Plan) This implies that a clear understanding of the issues and causes of impairment needs to be documented before proceeding with the development of standards.

## **III. Environmental Benefit of Criteria**

Revisions to Regulation No. 31 will set interim values for rivers and streams, lakes and reservoirs for phosphorous, nitrogen and chlorophyll a. The eventual use of these values in the development of standards will take place so close together that it will not allow sufficient time to measure the potential incremental benefits derived from meeting an individual standard for streams/creeks. For example, sufficient data has not been collected to determine what the impact of just implementing total phosphorous standards would have on the aquatic habitat and macroinvertebrates. This may affect the need and timing of further nutrient proposals such as total nitrogen. The difficulty in measuring the incremental environmental benefit derived from total nitrogen or phosphorous values was seen in the cost/benefit study which combined benefits for implementation of total nitrogen and phosphorous standards and did not report them individually. Further studies and research needs to be conducted to determine what the nutrient limiting component is for the streams/creeks, lakes/reservoirs and the quantitative benefit associated with the incremental implementation of nutrient values.

This approach could save millions of dollars if follow-up monitoring results reveal that the designated uses have already been protected. It might also be determined that additional standards are needed only on an as-needed basis. This would also allow additional time to

collect data on the natural variability of streams and other factors that could contribute to the inability of a stream to meet designated uses. The adverse effects of nutrients are strongly influenced by site-specific factors such as shading, geomorphology, turbidity, and flow as well as regional and seasonal conditions, and are expressed as impacts to entire ecosystems.

Once the proposed values in Regulation 31 are approved as interim values, the expectation will be that they are appropriate as statewide standards. In considering the development of nutrient standards, other states such as Florida invested over \$20 million to determine nutrient levels and biological impacts before developing standards. (EPA correspondence dated January 2009 from US EPA to Florida Department EPA) Since such funding does not appear to be available like that in Colorado, limited data is being used to recommend values that will later be used as the basis for developing standards.

Sufficient data has not been collected in our region to demonstrate that impairment exists for the proposed nutrient values. Data should support strong justification that by not achieving the proposed nutrient values in Regulation 31, designated uses will not be met. USGS data for several stream segments in the Fountain Creek Watershed does not show higher nutrient (Total Nitrogen and Phosphorous) values immediately downstream of discharge locations of wastewater treatment plants. In addition, other indicators of excessive nutrients such as high dissolved oxygen are not present. If technology-based limits for treatment plants are proposed, the need should be demonstrated prior to implementation. Significant data and research has not been conducted for Colorado to determine nutrient concentrations and ecosystem response, in addition to site-specific factors that may cause or contribute to nutrient impairment. This needs to be done to determine the specific area to focus throughout the State. Further monitoring is necessary for nutrients and other factors that contribute to impairment of aquatic life use.

#### **IV Rationale/Justification of Total Nitrogen Values**

PPACG recognizes that improvement in water quality is critical in degraded stream segments that are unable to support the full range of potential uses. However, the information provided does not clearly demonstrate that the streams are impaired for nutrients and would require implementation of Total Nitrogen and Total Phosphorous control.

From the data presented, it is difficult to determine what the individual incremental benefit is from the eventual implementation of Total Nitrogen control values. The presumption appears to be that both Total Phosphorous and Total Nitrogen standards are necessary for attainment of uses. Attainment of water quality is extremely important, but before resources are put forward in initiating new values, it might be prudent to first do some test studies so the benefit of implementing these nutrient values can be demonstrated.

## **V. Economic Impacts**

It is anticipated that the economic impacts of meeting these proposed standards will probably be greater on smaller facilities, which do not benefit from the economies of scale of larger facilities. In development of the proposed nutrient criteria values shown in Regulation 31, it is critical to consider social and economic impacts that will have unintended consequences during planning and prior to implementation, since these impacts could influence project design and potential mitigation actions. Increased costs to customers would include higher utility rates and/or increased taxes.

The cost/benefit analysis does not realistically assess the benefits derived from attainment of implementing the nutrient values. The stated benefits for angling, boating and swimming are based on the assumption that people are not taking advantage of these activities because nutrient control standards are not currently in place. Currently in the Fountain Creek Watershed, there is no boating or swimming and very little fishing. It is difficult to imagine that this would change as a result of implementation of nutrient standards.

## **VI Exhibits**

Exhibit 1: Excerpts for 208 Plan of Point source Dischargers (Note: A star has been placed under the dischargers that have a design capacity of greater than 0.5 mgd)

Respectfully Submitted this 20<sup>th</sup> day of January, 2012.

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

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## **CERTIFICATE OF MAILING**

I hereby certify that on this 20th day of January, 2012, the original and 13 copies of the Pikes Peak Area Council of Government's Responsive Prehearing Statement in the matter of Revisions to the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31) and the adoption of a new Nutrients Management Control Regulation, Regulation #85 (to be codified at 5 CCR 1002-85) were delivered by courier to the Commission office and by January 20th, 2012, a copy of the same will be electronically mailed or mailed by U.S. Postal Service, postage prepaid, to each person listed on the January 18, 2012, Party Status and Mailing Status Lists.

*Original Signature on File at*

*Pikes Peak Area Council of Governments*

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Richard Muzzy

**Exhibit 1: Excerpts from PPACG's Water Quality Management Plan (208 Plan) 2010 Update**

### 6.3 Point Source Dischargers

#### 6.3.1 Overview

Within the portions of Park and Teller counties in the South Platte Headwaters and Upper South Platte, there are currently six major ( $> 0.05$  mgd) discharging wastewater treatment facilities described in Table 6-4 and shown in Figure 6-3. Service area boundaries are only shown for major facilities. Table 6-5 lists the minor discharging facilities ( $< 0.05$  mgd) and Table 6-6 lists the only industrial discharging facility.

**Table 6-4: South Platte and Upper South Platte Discharge Locations  
Major Facilities ( $> 0.05$  mgd)**

Discharge	Permit No.	Location	Mgmt. Area	Design Capacity (mgd)	Existing Load (mgd)
Town of Alma	CO-0035769	Middle Fork of the South Platte River	Park	0.117	0.041
Fairplay Sanitation District	CO-0040088	Middle Fork of the South Platte River	Park	0.3	0.1
Florissant Water and Sanitation District	CO-0041416	Twin Creek, 0.25 mile west of Florissant along Highway 24	Teller	0.057	0.020
Bailey Water and Sanitation District	CO-0020605	North Fork of South Platte River	Park	0.075	0.03
Will-O-Wisp	CO-0041521	Wisp Creek	Park	0.06	0.025
City of Woodland Park *	CO-0043214	Trout Creek, west of treatment facility	Teller	0.893	0.59

## South Platte: Point Source Dischargers

**Table 6-5: South Platte and Upper South Platte Discharge Locations—  
Minor Facilities (< 0.05 mgd)**

Waste Water Treatment Plant	Permit No.	Discharge Location	Mgmt. Area	Design Capacity (mgd)	Existing Load (mgd)
Deer Creek Metropolitan District	(Site app approved 12/21/2005)	Deer Creek (trib. of the North Fork of SP River)	Park	0.012	Data not available
Camp Santa Maria	COX-660040 (exp 10/31/2010)	Discharge to groundwater from lagoons	Park	Data not available	Data not available
Quaker Ridge Camp	CO-0044199 (Permit exp date 8/31/2009)	Discharge to groundwater via soil absorption field	Teller	0.011	Data not available
Camp Shady Brook	CO-0045993	Discharge to groundwater	Teller	Data not available	Data not available
Lost Valley Ranch	CO-0046710	Discharge to groundwater	Park	Data not available	Data not available
Camp Alexander -- Boy Scouts of America	COG-588036 (Permit exp date 5/31/2010)	South Platte River (Segment 1a)	Teller	0.012	Data not available
Platte Canyon School District <sup>1</sup>	COG-588108 (Site app approved 6/30/2007)	North Fork of the South Platte River	Teller	0.019	Data not available
Teller County Wastewater Utility	CO-0044211 (Permit exp date 3/30/2012)	Rule Creek	Teller	0.035	0.033

<sup>1</sup>Treatment process is two septic systems followed by three-stage lagoon (approved 2007). BOD and suspended solid violations occurred in the last two quarters of 2009 (EPA enforcement and compliance history).

**Table 6-6: South Platte and Upper South Platte Discharge Locations Industrial Facilities**

Waste Water Treatment Plant	Permit No.	Discharge Location	Location	Facility Type
London Mine LLC	CO-0038334 (Permit exp date 1/31/2011)	South Mosquito Creek	Park	Hardrock Mining: Mine Dewatering



## 7.3 Point Source Dischargers

### 7.3.1 Overview

The Teller County portion of the watershed has two municipal dischargers one industrial discharger shown in Tables 7-4 and 7-5 and Figure 7-3.

**Table 7-4: Upper Arkansas Watershed Discharge Facilities**

Discharge	Permit No.	Discharge Location	Design Capacity (MGD)	Existing Load (MGD)
City of Cripple Creek	CO-0039900	Cripple Creek, southern edge of town	1.0	0.41
City of Victor	CO-0024201	Intermittent trib. of Wilson Creek at southern edge of Victor	0.087	0.049

**Table 7-5: Upper Arkansas Watershed Industrial Discharge Facilities**

Discharge	Permit No.	Discharge Location		Capacity
Cripple Creek and Victor Gold Mining	CO-0043648	Arequa Gulch		NA

### 8.3 Point Source Dischargers

#### 8.3.1 Overview

Fountain Creek Watershed currently has 13 major (discharge > 0.05 mgd) wastewater treatment plant dischargers, shown on Table 8-3 and Figure 8-3, which primarily discharge either to Fountain or Monument Creeks and tributaries. Colorado Springs Utilities (SU) operates the largest discharge facilities in the watershed.

**Table 8-3: Fountain Creek Watershed Discharge Locations Major Facilities (> 0.05 mgd)**

Waste Water Treatment Plant	Permit No.	Discharge Location	Mgmt. Area	Design Capacity (mgd)	Existing Load (as of Aug 2009) (mgd)
Colorado Springs Utilities Las Vegas Facility	CO-0026735	Fountain Creek Segment 2a-via Fountain Mutual irrigation channel	MM	65.0 (Jan and Feb) /75.0 (Remainder of year)	36.6
Colorado Springs Utilities J.D. Phillips Facility	CO-0046850	Monument Creek south of Pikeview Reservoir	MM	20	6.6
Academy Water and Sanitation District	COG-589020	Smith Creek at southern edge of treatment facility	UM	0.116	0.05
Upper Monument Creek Regional WWTF (Donala Water and Sanitation District, Forest Lakes and Triview Metropolitan Districts)	CO-0042030	Monument Creek at southwest corner of service area	UM	1.750	0.8
Monument, Palmer Lake and Woodmoor Water and/or Sanitation District	CO-0020435	Monument Creek at southern edge of Tri-Lakes service area	UM	4.2	1.38
United States Air Force Academy	CO-0020974	Academy's effluent recycle system	UM	2.2	1.4
Cherokee Metropolitan District	CO-0024457	East fork of Sand Creek west of north entrance to PAFB	LF	2.0	1.45
Tri-Lakes WWTF (Cheyenne Mountain Estates-Broadmoor Park)	CO-34274	Intermittent tributary of Fountain Creek about 0.5 miles upstream of Hwy 115.	LF	0.06	0.03
Fort Carson	CO-0021181	Clover Ditch about 1 mile upstream from Fountain Creek confluence	LF	3.0 (application to re-rate to 4.0) <sup>7</sup>	1.2
Fountain Sanitation District	CO-0020532	Fountain Creek, southern edge of treatment facility	LF	1.908 <sup>9</sup>	1.25
Security Sanitation District	CO-0024392	Fountain Creek, upstream from Carson Blvd. bridge	LF	2.4 <sup>2</sup>	1.27
Widefield Water and Sanitation District	CO-0021067	Fountain Creek, 0.25 miles downstream from Colorado Hwy 16. bridge	LF	2.5 <sup>10</sup>	1.4
Lower Fountain MSDD	Pending	Trib. of Fountain Creek; 1.8 miles from mainstem; Will begin in 2011	LF	2.5 <sup>11</sup>	0

- Town of Calhan is located northeast of the Watershed along Highway 24; and
- Walden Corporation is located northwest of the Watershed.

**Table 9-3: Chico Creek Watershed Major Point Source Discharge Facilities**

Wastewater Treatment Plant	Permit No.	Discharge Location	Proposed Mgmt. Area	Design Capacity (mgd)	Existing Load (mgd)
Paint Brush Hills Wastewater Treatment Facility	CO-0047091	Unnamed tributary of Black Squirrel Creek, east of treatment plant	Upper Black Squirrel	1.3	0.94
Santa Fe Springs WWTF (Not Operational)	Not Issued	CDPHE is reviewing plant design – construction is on hold	Upper Black Squirrel	Permit Not Issued	Permit Not Issued
Cherokee Metropolitan District	Not Issued	Discharge to groundwater (eleven recharge basins have been constructed at the site)	Upper Black Squirrel	4.8	Discharge August 2010
Sunset's Ellicott Springs	COG-0047252 (Permit exp 12/31/2010)	No surface discharge; authorized to discharge to unnamed tributary of Black Squirrel Creek at southeast corner of facility	Upper Black Squirrel	0.25	0.01

*Note: All point source dischargers are located in the Upper Black Squirrel Subwatershed. The future (August 2010) Cherokee Metropolitan District discharge location is shown in Figure 9-2, and the current location is shown in Figure 8-2 (Fountain Creek Watershed Point Source Discharge Section).*

### Highway 94 Comprehensive Plan

El Paso County completed the last update of the Highway 94 Comprehensive Plan, which was originally adopted by the El Paso County Planning Commission in 1985 and updated in July 2003. The planning area includes approximately 120 square miles—100 square miles centered around Schriever Air Force Base, and another 20 square miles centered around the Colorado Centre area. This small area plan element is used as a guide for future Board of County Commissioners' actions concerning land development requests. This document acknowledges wastewater treatment as a significant planning parameter affecting the area. The plan acknowledges pressures for urban density development along State Highway 94 and also recognizes the substantial up-front costs associated with constructing new wastewater treatment plants for such developments.